PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-LINIS D'AMERIQUE

Date of mailing (day/month/year) 01 December 2000 (01.12.00)	ETATS-UNIS D'AMERIQUE in its capacity as elected Office
International application No. PCT/US00/01565	Applicant's or agent's file reference PF-0661 PCT
International filing date (day/month/year) 21 January 2000 (21.01.00)	Priority date (day/month/year) 22 January 1999 (22.01.99)
Applicant	
HILLMAN, Jennifer, L. et al	

1.	The designated Office is hereby notified of its election made: X in the demand filed with the International Preliminary Examining Authority on:
	27 July 2000 (27.07.00)
	in a notice effecting later election filed with the International Bureau on:
2.	was not
	made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Pascal Piriou

Telephone No.: (41-22) 338.83.38



INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To.	DIANA HAMLET-COX INCYTE PHARMACEUTICALS, INC
	INCLUE DITTILITY
	3174 PORTER DRIVE
	PALO ALTO, CA 94304

3174 PORTER DRIVE PALO ALTO, CA 94304	N	NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT		
		(PCT Rule 71.1)		
	Date of (day/mo	Mailing 15 AUG 2002		
Applicant's or agent's file reference		IMPORTANT NOTIFICATION		
PF-0661 PCT International application No. PCT/US00/01565	International filing date (day/m 21 JANUARY 2000)	onth/year) Priority Date (day/month/year) 22 JANUARY 1999		
Applicant INCYTE PHARMACEUTICALS	5, INC.			

- The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international ١.
- A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices. 2.
- Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices. 3.

REMINDER 4.

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT4B 301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks

Box PCT Washington, D.C. 20231

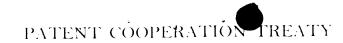
Facsimile No.

Authorized officer

Alana M. Harris, PH.D.

TO3. 305 0196 Telephone No.

Form PCT 4PEA 446 July 1992 *



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

International application No. International filing date (day/month/year) Priority date (day/month/year) Priority date (day/month/year) Priority date (day/month/year) 22 JANUARY 1999	Applicant's or agent's file reference PF-0661 PCT	FOR FURTHER ACTION See Notification of Transmittal of Internat Preliminary Examination Report (Form PCT/IPEA/			
PCT/US00/01565 21 JANUARY 2000 22 JANUARY 1999 International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet. Applicant INCYTE PHARMACEUTICALS, INC. 1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of sheets. This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and or drawings which has been amended and are the basis for this report and or sheets containing rectifications made before this Authori (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheets. 3. This report contains indications relating to the following items: 1	International application No.	International filing date (day/month/year)	Priority date (day/month/year)		
Applicant INCYTE PHARMACEUTICALS, INC. 1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of		21 JANUARY 2000	22 JANUARY 1999		
Lack of unity of invention V X Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicabilicitations and explanations supporting such statement VI Certain documents cited VII Certain defects in the international application	Applicant INCYTE PHARMACEUTICALS, INC 1. This international prelimin Examining Authority and is 2. This REPORT consists of a This report is also accombeen amended and are the (see Rule 70.16 and Section These annexes consist of a to a section of the report contains indication and the report contains indication and report contains indication are proportionally as a section of the report contains indication and report contains indication are proportionally as a section of the report contains indication and report contains indication are proportionally as a section of the reportion of the repor	ary examination report has been preport framework to the applicant according total of sheets. panied by ANNEXES, i.e., sheets of the declarity by the Administrative Instruction tal of sheets. Instruction to the following items:	g to Article 36. escription, claims and or drawings which ha ning rectifications made before this Authori		
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	D07-13-4	I Alana M. H	larris, MH.D.		
Box PCT Washington, D.C. 20231			/		

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International	application	No.

PCT/US00-01565

With regard to the el	ements of the internatio	onal application:
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X	1-56	as originally filed , as originally filed , filed with the demand
pages	NONE	filed with the letter of
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT USoo 01565

V.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability	έ,
	citations and explanations supporting such statement	

Claims	7, 12 and 16-23	ΥΙ·
Claims	1-6, 8-11, 13-15	NC
Claims	none	YI
Claims	1-23	N(
	1.30	ΥI
		NO
Claims	none	.//
	Claims Claims Claims	Claims 7, 42 and 46-23 Claims 1-6, 8-11, 13-15 Claims none Claims 1-23 Claims 1-23

2. citations and explanations (Rule 70.7)

Claims 1-6, 8-11 and 13-15 lack novelty under PCT Article 33(2) as being anticipated by Chen et al. (The Journal of Biological Chemistry 273(28):17618-17625, July 16, 1998). These references disclose an isolated polypeptide comprising a naturally occurring amino acid sequence having at least 90% sequence identity to SEQ ID NO:2, as well as biologically active and immunogenic fragments of SEQ ID NO:2. Figure 3 of the Chen reference discloses the encoded polypeptide. The paper also discloses an isolated antibody that is capable of binding to the polypeptide.

Claims 7, 12 and 16-23 lack an inventive step under PCT Article 33(3) as being obvious over Chen et al. (The Journal of Biological Chemistry 273(28):17618-17625, July 16, 1998). These references are discussed above. The Chen reference suggests that the disclosed polypeptide has potential use in an immunotherapy method for treating prostate and other cancers. With the treatment of patients one of skill in the art could easily screen the compounds for their effectiveness.

CHEN et al. Isolation and characterization of PAGE-1 and GAGE-7. The Journal of Biological Chemistry. 10 July 1998, Vol. 273, pages 17618-17625.



International application No.

PCT USoo 04565

Suppl	emental	Box
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(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

 $Sheet\ 10$

CLASSIFICATION: The International Patent Classification (IPC) and/or the National classification are as listed below: IPC(7): A61K 35/14, 38/00, 38/16; C 07K 1/00, 14/00, 16/00, 17/00; C07H 5/04, 5/06, 19/00, 21/00, 21/02, 21/04, C08B 37/00. C12P 21/06 4/00, 21/08, C12Q 1/68; C12N 5/00, G01N 33/00, 7/00, 14/00, 17/00 and US CL: 435/4, 6, 69.1, 325, 530/300, 350, 380, 385, 386, 387.1, 387.1; 536/1, 18.7, 22.1, 23.1, 23.5, 23.53

PATENT COOPERATION TREATY



PCT



INTERNATIONAL SEARCH REPORT

	(PCT Article 18 and Rules 43 and 44) Attack Search Report	\neg
	FOR FURTHER see Notification	on of Transmittal of International Search Report SA/220) as well as, where applicable, item 5 below.	
plicant's or agent's file reference	ACTION (Form PC1/IS	D-to (day/month/year)	\dashv
-0661 PCT	International filing date (day/month/year)	(Earliest) Priority Date (day/month/year)	1
ernational application No.	4	22/01/1999	
CT/US 00/01565	21/01/2000		
pplicant			}
PMACEUTICALS 1	NC. et al.		
NCYTE PHARMACEUTICALS, 1			
This International Search Report consist		g Authority and is transmitted to the applicant in this report.	
X It is also accomp		the basis of the international application in the	
1. Basis of the report	the international search was carried out of unless otherwise indicated under this item		
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Authority (Hule 25.1)	and/or amino acid sequence disclosed	in the international application, the international search	
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•	total (See Box I)		
2. X Certain claims we	re found unsearchable (See Box I).		
3. X Unity of invention	is lacking (see Box II).		
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4. With regard to the title,	U 45 - annlinant		
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5. With regard to the abstract,	be that by the applicant.	the applicant ma	ay,
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	plicant failed to suggest a figure.		
because this fig	ure better characterizes the invention.		

PCT





INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7:

C12N 15/10, 5/10, C07K 14/47, 16/18, A01K 67/027, A61K 38/17, G01N 33/50, C12Q 1/68

(11) International Publication Number:

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21 January 2000 (21.01.00)

(30) Priority Data:

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22 January 1999 (22.01.99) US

(74) Agent: HAMLET-COX, Diana; Incyte Pharmaceuticals, Inc., 3174 Porter Drive, Palo Alto, CA 94304 (US).

(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application

US

09/236,205 (CIP)

Filed on 22 January 1999 (22.01.99)

(71) Applicant (for all designated States except US): INCYTE PHARMACEUTICALS, INC. [US/US]; 3174 Porter Drive, Palo Alto, CA 94304 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HILLMAN, Jennifer, L. [US/US]; 230 Monroe Drive #12, Mountain View, CA 94040 (US). YUE, Henry [US/US]; 826 Lois Avenue, Sunnyvale, CA 94087 (US). TANG, Y., Tom [CN/US]; 4230 Ranwick Court, San Jose, CA 95118 (US). AZIMZAI, Yalda [US/US]; 2045 Rock Springs Drive, Hayward, CA 94545 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). OAPI

patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR,

NE, SN, TD, TG).

Published

With international search report.

(88) Date of publication of the international search report:

16 November 2000 (16.11.00)

(54) Title: CANCER-ASSOCIATED PROTEINS

(57) Abstract

The invention provides human cancer-associated proteins (CAP) and polynucleotides which identify and encode CAP. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with expression of CAP.

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INTERNATIONAL SEARCH REPORT

'al Application No

PCT/US 00/01565

A CLASSIFICATION OF SUBJECT MATTER IPC 7 C12N15/10 C12N5/10

G01N33/50 A61K38/17

C07K14/47 C12Q1/68

CO7K16/18

A01K67/027

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification sympols) C12N C07K A01K A61K G01N C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

Category °	ENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	DATABASE EMBL [Online] EMBL ID HSZZ67198, Accession No. AA362051, 18 April 1997 (1997-04-18) ADAMS M.D. ET AL.: "EST71450 from H. sapiens, MCF7 cell line" XP002138148 encodes aa 221-275 of CAP2.	1-3, 8-17,20, 23
X	DATABASE GENBANK [Online] Accession No. AAB60391, GI 487348, 15 December 1995 (1995-12-15) CHISSOE S.L. ET AL.: "BCR gene" XP002138149 cited in the application the whole document	1-3, 8-17,20, 23

X	Further documents	are listed in the	continuation of box C

Patent family members are listed in annex X

- * Special categories of cited documents
- "A" document defining the general state of the art which is not considered to be of particular relevance.
- "E" earlier document but published on or after the international filing date
- "L" document which may throw coubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means

Date of the actual completion of the international search

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- Tile tater document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory, underlying the
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- "&" document member of the same patent family

Date of mailing of the international search report

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19 May 2000 Name and mailing address of the ISA

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Authorized officer

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Intern nat Application No PCT/US 00/01565

		PCT/US 00/01565
Continua	IDON) DOCUMENTS CONSIDERED TO BE RELEVANT	Relevant to claim No
ategory "	Citation of document, with indication, where appropriate	1-17,20,
4	WO 93 06858 A (DANA FARBER CANCER INST INC) 15 April 1993 (1993-04-15)	23
	abstract	:
		i !
		, ,



INTERNATIONAL SEARCH REPORT

lional application No PCT/US 00/01565

Observations where certain cla	ims were found unsearchable (Continuation of item 1 of first sheet)
	established in respect of certain claims under Article 17(2)(a) for the following reasons
Claims Nos because they relate to subject matter	not required to be searched by this Authority, namely
Claims 16,19,22 are d	irected to a method of treatment of the human/animal indicated to a method of treatment of the human/animal ible, the search has been carried out and based on the compound/composition.
Claims Nos 18,19,	21.22 stemational Application that do not comply with the prescribed requirements to such thought on the carried out, specifically
see FURTHER INFORMATI	ON sheet PCT/ISA/210
Claims Nos	, and are not drafted in accordance with the second and third sentences of Rule 6.4(a)
	invention is lacking (Continuation of item 2 of first sheet)
is International Searching Authority found	
As all required additional search for searchable claims.	ees were timely paid by the applicant, this International Search Report covers all
As all required additional search for searchable claims.	
As all required additional search for searchable claims. As all searchable claims could be of any additional fee	ees were timely paid by the applicant, this International Search Report covers all
As all required additional search for searchable claims. As all searchable claims could be of any additional fee. As only some of the required additional search for which the restricted to the invention first meaning search feet restricted to the invention first meaning search feet.	searched without effort justifying an additional fee, this Authority did not invite payment
As all required additional search for searchable claims. As all searchable claims could be of any additional fee. As only some of the required additional covers only those claims for which	searched without effort justifying an additional fee, this Authority did not invite payment iltional search fees were timely paid by the applicant, this international Search Report in fees were paid, specifically claims Nos.
As all required additional search for searchable claims. As all searchable claims could be of any additional fee. As only some of the required additional search for which the restricted to the invention first meaning search feet restricted to the invention first meaning search feet.	searched without effort justifying an additional fee, this Authority did not invite payment strongly search fees were timely paid by the applicant, this International Search Report in fees were paid, specifically claims Nos

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: (1-23) - partly

An isolated CAP-2 polypeptide characterized by Seq. ID 2 or fragments thereof. Corresponding nucleic acids (Seq. ID 5).

Vectors, recombinant host cells, transgenic organisms, production methods, detection methods, antibodies, pharmaceutical compositions and therapeutic applications, antagonists and agonists and methods to identify them.

2. Claims: (1-23) - partly

Idem as subject-matter 1 but limited to CAP-3 (Seq. IDs 3 and 6).

International Application No PCT/US 00/01565

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 18,19,21,22

Claims 18,19,21,22 refer to agonists and antagonists of the CAP proteins described, but do not give a true technical characterization. Moreover, no such compounds are described in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is sufficiently disclosed and supported (Art. 5 and 6 PCT). No search not sufficiently disclosed and supported (Art. 5 and 6 PCT) are such can be carried out for such purely speculative claims, whose word is, in fact, a mere recitation of the results to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is preliminary examination on the claims are amended following the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.



in. lation on patent family members

Interna" 3/ Application No

PCT/uS 00/01565

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9306858 A	15-04-1993	CA 2120363 A	15-04-1993